

DETAILS OF ADDRESSES DELIVERED BY LECTURERS OF THE EUGENICS SOCIETY

JUNE—OCTOBER 1939

Date.	Speaker.	Society or Organization.	Subject.	Number Present.
June 15th.	Mrs. Poole.	Hayes Women's Co-operative Guild.	Heredity.	30
June 19th.	Mrs. Tamplin.	Co. Durham, Sacriston Women's Co-operative Guild.	Heredity—The Children of To-day and To-morrow.	40
June 20th.	Mrs. Tamplin.	Co. Durham, Chester-le-Street Women's Co-operative Guild.	Aim of Eugenics.	75
June 20th.	Mrs. Poole.	Harrow Road Women's Co-operative Guild.	Heredity.	38
June 22nd.	Miss Pocock.	Stratford, E., Infant Welfare Centre.	Heredity.	35
June 26th.	Mrs. Tamplin.	Newcastle-on-Tyne Women's Co-operative Guild.	The Children of To-day and To-morrow.	41
June 27th.	Mrs. Tamplin.	Durham, Annfield Plain, Women's Co-operative Guild.	The Children of To-day and To-morrow.	22
July 3rd-8th.	Mrs. Tamplin. Miss Pocock.	Royal Sanitary Institute Congress and Exhibition, Scarborough.	Exhibit awarded bronze medal.	
July 10th-15th.	Mrs. Tamplin.	Orpington, Community Council Health Week.	Exhibit.	500
October 16th.	Miss Pocock.	Bromley Women's Fellowship, St. Augustine's Hall.	The Future of our Population.	60
October 18th.	Miss Pocock.	Higham Hill Co-operative Women's Guild.	Heredity.	22

PHYSIOLOGICAL ZOÖLOGY

Articles appearing in forthcoming issues :

REACTIVITIES OF COLPODA DUODENARIA TO ENVIRONMENTAL FACTORS. II. FACTORS INFLUENCING THE FORMATION OF RESTING CYSTS. By C. V. TAYLOR and A. G. R. STRICKLAND, Stanford University.

RETARDATION OF EARLY CLEAVAGE OF URECHIS BY ULTRA-VIOLET LIGHT. By ARTHUR C. GIESE, Stanford University.

ON THE KILLING ACTION OF OPTICALLY ISOMERIC NICOTINES IN RELATION TO PROBLEMS OF EVOLUTION OF THE NERVOUS SYSTEM IN ANIMALS. By G. F. GAUSE and N. P. SMARAGDOVA, Institute of Zoölogy, University of Moscow.

THE PRODUCTION OF DUPLICITAS CRUCIATA AND MULTIPLE HEADS BY REGENERATION IN *EUPLANARIA TIGRINA*. By ROBERT H. SILBER and VIKTOR HAMBURGER, Washington University.

Edited by W. C. ALLEE, Professor of Zoölogy, The University of Chicago. Published
Quarterly by the University of Chicago Press. Subscription : 35s. 2d. per year.

English Agents : **CAMBRIDGE UNIVERSITY PRESS**

PERIODICALS

American Journal of Physical Anthropology

April-June 1939, Vol. 25, No. 1.—*Normal Micro- and Macrocephaly in America.*—By A. Hrdlička.—This gives a detailed account of 29 skulls (of whom 23 female) of capacity 910 to 1,050 cc., including 27 from old Peru, and 24 skulls (of whom 21 definitely male) of capacity 1,750-2,100 cc. The smallest skulls match *Pithecanthropus* (900 cc.), the largest match the largest on record. Both small and large are free from gross anomalies; the sutures seem normal; the three large female skulls have clearly female features. Large skulls show greater fullness of the vault, small skulls generally have small teeth. The brain appears able to enlarge without affecting proportionately the cranial and facial dimensions. There is no indication of abnormal body size among these exceptional individuals.

Blood Grouping in Eastern Eskimo.—By K. W. Sewall.—It is shown that among 146 pure and 56 mixed individuals of Labrador and Baffin Land, 107 were *O*, 93 were *A*, 0 were *B*, 2 were *AB*. Again 64 were *M*, 36 were *N* and 102 were *MN*. *O* is rather lower and *A* rather higher than among other Eskimo samples. No blue eyes were observed; only 4 had hair on the second digital phalanx.

Development of the Bridge of the Nose.—By M. S. Goldstein.—This shows that the bridge diminishes in width from 3 to 17 or 19 years of age and then increases slightly until 21, and appreciably more in old age. The decrease in childhood is progressively greater the farther from the apex. The bridge grows forward about 10 mm., between the ages of 3 and about 17.

Pulp Cavities of Molars in Primates.—By M. S. Şenyürek.—The author finds that Eocene primates, Lemuroidea and Cercopithecidae are cynodont, South American monkeys taurodont. Taurodontism is also found in some living Hylobatidae and Simiidae and in some of the Siwalik anthropoid fossils as well as, in a moderate degree, among early hominids. In modern *homo sapiens* outside Europe traces of taurodontism can be found and fossil men of modern type are intermediate between the taurodont hominids and modern man. *Homo sapiens* is claimed to be derived from a moderately taurodont ancestral form; in the evolution of modern man the size of the pulp cavity has diminished, probably also in the anthropoid apes.

H. J. FLEURE.

Annals of Eugenics

June 1939, Vol. 9, Part 2.—*The distribution of the M and N factors in random samples of different races.*—By G. L. Taylor and Aileen M. Prior.—

The authors compare 55 sets of data on the distribution of the M and N factors. Large departures from expectation are thought to be due to faulty diagnostic technique by some of the investigators, rather than to any inadequacy in the widely accepted genetic theory of Landsteiner and Levine. Grouping the data by nationality, marked heterogeneity between nations of the proportions of the two genes is found, there being also evidence of heterogeneity among the compound sets of some nations. The data also show heterogeneity in the departures from expectation of the numbers of heterozygotes; as this variation shows no association with national differences, it is considered to be further evidence of errors in diagnosis and not indicative of the use of a wrong theory of inheritance.

Application of individual taste difference towards phenyl-thio-carbamide in genetic investigations.—By Grethe Hartmann.—533 individuals were tested for their threshold of ability to taste P.T.C., by use of a two-fold dilution series of 11 concentrations derived from a saturated solution. The resultant bimodal distribution showed there to be a range of thresholds near the value 3 in which the dichotomy into "tasters" and "non-tasters" cannot be made with certainty. General agreement with Blakeslee's findings is recorded, but comparison with other methods of testing shows the possibility of diagnosis varying to some extent with the method used. The threshold value method, giving a quantitative measure of the capacity, is considered to be demonstrably superior to those previously proposed.

Tests for sex-linkage in a quantitative character.—By D. J. Finney.—Two methods are applied to data originally collected by Galton in order to test the possible existence of a sex-linked gene influencing stature. On account of certain contradictions in the data, the analysis leads to no definite conclusions, but the methods may be of use in other similar investigations.

Papers less directly of interest to the eugenicist include a study of selective forces in a wild population by R. A. Fisher, a further contribution by F. Yates to the theory of experiments for the testing of a large number of varieties, and an example from C. D. R. Dawson of the application and analysis of such an experiment.

D. J. FINNEY.

Archiv der Julius Klaus-Stiftung

1939, Vol. 14, Nos. 1 and 2.—*Anthropologische Untersuchungen im Engstligen- und Frutigen (Bernese Oberland).*—By Hedwig Bosshart.—A report on anthropological examinations made in 1934 and 1935 in valleys of the Bernese Oberland. Measurements were taken only of adults and their

children whose parents both originated from the same district. 1,207 individuals were examined as a whole.

Ein Beispiel von Vererbung musikalischer Begabung.—By A. Löffler-Herzog.—A chart of a family in which three first class musicians occurred.—Emanuel Friedli, Edwin Fischer, Alfred Kliemann.

Anthropologische Untersuchung der Handform mit einem familienkundlichen Beitrag.—By Willy Wechsler.—It cannot be decided whether a particular shape of the hand, e.g. the broad and short hand, or the narrow and long one, is conveyed in the way of recessive or dominant heredity. The examination shows clearly that it is much more difficult to study the inheritance of normal traits than that of pathological ones. Moreover, the hand is not a unity and its shape depends greatly on the tendencies of growth and shaping inherent to the whole body-build. Thus we cannot expect a circumscribed hereditary parental influence on the hand or types of the hand to occur with absolute certainty.

FELIX TIETZE.

Character and Personality

March and June 1939, Vol. 7, Nos. 3 and 4.—*The Factorial Analysis of Emotional Traits.*—By C. Burt.—In two articles Professor Burt gives a non-technical account of his work on the analysis of temperamental traits and types, which has been going on for nearly thirty years. After pointing out the subjectivity of our everyday notions of racial, sexual, and other temperamental types, he describes the methods for obtaining objective records of emotional qualities. Factorial analysis of such records has revealed, first, a general emotionality factor (some persons displaying all varieties of emotion more readily than do others); secondly, a factor corresponding roughly to the conventional extrovert-introvert types; and thirdly a factor of stability-instability. These are considered to be deeply rooted temperamental tendencies, in contrast to Webb's "w" or will factor, which is an acquired general character factor. The author goes on to describe the connection between these temperamental types and artistic preferences, and lists the poets, painters, etc. who particularly appeal to the stable-extrovert, the unstable-introvert, and other types.

No. 3 contains an obituary of William McDougall by Professor Spearman, and a full bibliography of his publications. In No. 4, Dr. F. C. Thomas discusses the opposition between the clinical and psychometric approaches to the study of personality. In an earlier issue the different viewpoints were put forward by Vernon and Cattell, respectively, with special reference to the adequacy of the Stanford-Binet intelligence test. Here Thomas concludes that Vernon is correct in assuming that the clinical approach and intuition

play a large—possibly the larger—part in present-day diagnosis, but that this approach will become progressively less important as psychometry makes advances in the objective analysis and measurement of human traits and abilities.

P. E. VERNON.

Journal of Contraception

June-July 1939, Vol. 4, No. 6.—The effect of X radiation on the gametes and on developing embryos has in recent years attracted the attention of many investigators and evidence is accumulating that X-rays may induce mutations which might otherwise take many years to appear. Some of these mutations are lethal, causing more or less rapid death of the embryo; others are not. Dr. Roberts Rugh of Columbia University has recently been studying the effect of direct irradiation of frog sperms and gives a brief report of his findings in this number of the *Journal*. He used doses of X-rays ranging from 15 to 120,000 Roentgen units and found that within this range the sperms could not be killed, rendered immotile or deprived of their fertilizing powers, but that significant changes were produced, presumably in the nucleus (since spermatozoa are nearly 100 per cent. nucleus), as demonstrated by the effect on the embryos resulting from the fertilization of ova by these irradiated sperms. Even with doses as low as 15r a small proportion of embryos showing such abnormalities as spina bifida, oedema and microcephaly; and hemi-embryos also sometimes resulted. With increasing dosage the percentage of abnormalities increased, until at 500r (the usual dose for producing sterilization in the human female) only about 50 per cent. of embryos hatched and most of these died shortly after hatching. At 1,000r nearly all embryos died before hatching (mostly at the stage of gastrulation). At 10,000r all died before hatching. At 30,000r or more the sperm initiated the division of a normal ovum but apparently took no part in the development of the embryo, since such embryos hatched and developed normally, presumably by a process of gynogenesis. These experiments indicate that at the lower dosages the sperm nucleus is sufficiently damaged to prevent completely normal fusion with the egg nucleus, so that abnormalities or premature death of the resulting embryos occur; whereas at the higher dosages the sperm are so completely knocked out that they retain only the power of initiating division in much the same way as pricking or chemical stimulation of the egg. In other words the frog sperm can be damaged long before it can be killed. Dr. Rugh hopes to extend these studies to mammalian spermatozoa.

J. Tynen, from the Sir William Dunn School of Pathology, Oxford, summarizes some of the findings from the examination of 500 specimens of seminal fluid from twenty-six different men (fourteen are stated to be fertile, no definite

statement being made about the remaining twelve). These observations showed that on an average an ejaculate has a volume of 3.9 cc., contains 565 million sperms, and requires 3.0 cc. of N/100 acid to neutralize 1.0 cc. of the fluid.

Dr. J. R. Baker, from the same school, describes a routine method for the examination of semen specimens. He points out that if a sheath is used for collecting a specimen it should be made of rubber which is as non-spermicidal as possible and should be free from starch-grains. The semen should be transferred to a glass container within five minutes of ejaculation and kept at room temperature. The examination should be made within three to six hours of production and should include measurement of volume (average = 4.3 ccs.) and alkalinity of the fluid; motility (50 per cent. or more motile) and abundance of sperms (520 million) and their resistance to a standard spermicide; and finally examination of a stained drop of washed and centrifuged cellular elements. Dr. Baker defines microsperms as those having heads less than two-thirds normal length and pyriform sperms as those having heads narrow at the base like an elongated pear, and he regards the presence of more than 10 per cent. of such sperms as abnormal and indicative of possible sterility. He does not regard residual cytoplasm on the middle piece or vacuoles in the head as abnormal unless present in a large proportion of sperms. The presence of spermatids, spermatocytes, polygonal epithelial cells and leucocytes should not exceed 1 per cent. in normal specimens; spermatogonia, Sertoli cells, fat-containing cells, giant cells and macrophages are only found in pathological fluids. Prostatic concretions and spermine crystals are normal findings.

August-September 1939, Vol. 4, No. 7.—N. J. Eastman, A. F. Guttmacher and E. H. Stewart contribute a paper on experimental observations on sperm immunity in the rat. They considered that this problem needed further investigation owing to the contradictory results obtained by previous workers. That parenteral injections of semen produces specific antibodies in the serum of the recipient animal would appear to be well established, but there is no such unanimity as to what degree of temporary sterility, if any, results from these injections. The study planned by Eastman, Guttmacher and Stewart extended over a period of two years and comprised a series of twelve experiments in which they attempted to produce sterility in rats by injecting them with varying doses of dog, horse, ram and homologous rat sperms. The fertility of both control and experimental groups of rats was measured by the time elapsing between the first exposure of a female to a male and the time of dropping a litter. The results obtained by these investigations are of interest and merit quoting in full:

"It is apparent in both the control and injected

animal series that fertility definitely begins to decrease when the animal is twelve and a half months old (as shown at the Wistar by Helen King in 1916). This decrease is slowly progressive and probably is the actual explanation for the partial success of experiments VI, VII and VIII. When one compares, age by age, the fertility of the injected animals with the controls, it appears that parenteral injection of live sperm reduces slightly the fertility of the recipients, but the reduction is neither of significant degree nor of practical importance."

In this number of the *Journal* there are several reproductions of Dr. R. L. Dickinson's very beautiful drawings of pelvic anatomy illustrating the method of fitting various caps, and also of some models and bas-reliefs, made for him by a sculptor, Abram Belskie, of the female pelvis during parturition (based mainly on X-ray photographs) and the development of the human embryo. Dr. Dickinson in a short article points out the value of such drawings and models for teaching not only students and practitioners but also patients, and appeals for a wider use of really faithful reproductions of human anatomy and embryology for such purposes. Certainly Dr. Dickinson's drawings are not only extremely accurate but are in themselves works of art.

MARGARET C. N. JACKSON.

Journal of Criminal Law and Criminology

March-April 1939, Vol. 29, No. 6.—In an article on some *Unusual Aspects of Mental Irresponsibility in the Criminal Law*, Frederick Woodbridge, Instructor in Law at the University of Cincinnati, refers to the definition of feeble-mindedness adopted by the American Association for the Study of Feeble-mindedness which is the authoritative body on that subject in the United States. It differs from the definition in this country in that it is used generically to include idiots, imbeciles and morons, whereas the Mental Deficiency Act, 1927, distinguishes feeble-minded persons from idiots, imbeciles and moral defectives. The moron group only is comparable to our feeble-minded group. The author states the American Courts generally refuse to consider low mentality as a mitigating factor in criminal cases although there are a few notable exceptions. English law provides alternatives to imprisonment for delinquent defectives, except when a capital offence is committed. In this event the Secretary of State has power to recommend the death sentence be commuted. The author discusses the history of criminal responsibility in deafmutism, somnambulism and somnolentia. The latter term is used for acts which are carried out whilst the subject is in the period between apparent waking-up and the time

when the senses are fully receptive; the term somnambulism being limited to acts carried out during sleep. This interesting article was prepared as a portion of a research project under Professor Sheldon Glueck.

May-June 1939, Vol. 30, No. 1.—Paul v. Trovillo, Forensic Psychologist, Chicago Police Scientific Crime Detection Laboratory, concludes his historical survey of *Lie-Detection*, the first instalment of which appeared in March-April number. Apparatus is illustrated and described which records blood pressure and respiration curves, verbal stimulus and response, electro-dermal reactions, and voluntary and involuntary reactions of the hands. The method is intended to register the emotion of fear and, as the author points out, the more means we have for the examination of lie-suspects the more we may come to a correct interpretation of their status. Some people react under emotional stress in one way, some in another. The fear of detection may in one person raise the blood pressure yet not disturb respiration or electro-dermal responses, in another person it may affect only the respiration, or only the electro-dermal reaction. Further possibilities for gauging the fear associated with deception are suggested, for example, the chemical examination of the blood, urine, saliva and sweat, the estimation of the nitrogen excretion, spleen and stomach contraction, gastro-intestinal tone and activity and various motor responses as well as reactions taking place under the influence of narcotics. The value of such tests unless applied by scientifically trained observers would be in doubt and in many cases the co-operation of medical men would be essential. We are told that of 2,171 persons examined on the polygraph, twelve mistakes in diagnosis of innocence and guilt were verified. This may be a small proportion of error in the application of a complicated instrumental test but might well be large enough for the purpose of defending counsel. It would seem that much experimentation on individuals of different temperaments and in different states of health is required before accepting the method as a practical contribution to criminal justice, and in this country public and medical opinion might be opposed to its application as such.

In an article on *Constitutional Psychopathic Inferiority in Relation to Delinquency*, Dr. Harold S. Hulbert deals in a stimulating manner with a class of offender born below standard in function and adaptability but neither sane nor insane. They are socially maladapted and attempts have been made to classify them on the basis of distortion of impulse, of temperament and of character. Dr. Hulbert prefers to classify them into types rather than into large groups. At the same time he points out that there are times when normal people show queer behaviour, that this is one of the characteristics of normality, that no two persons are

identical and that no one individual is exactly identical with himself at other times and under other circumstances. Psychopathic inferiority must be differentiated from true inferiority, organ and system inferiority, from inferiority complex, asthenia and immature personalities.

The Swiss Federal Criminal Code of December 21st, 1937, is translated and introduced by Walter Friedlander and W. Abraham Goldberg as a separate supplement to this number. The administration of justice, the organization of all Courts and authorities, the execution of sentences and the administration of prisons and institutions of all kinds remain the exclusive task and jurisdiction of the Cantons, and there is no interference with the decision of the Cantonal Courts or authorities. Two basic principles have been transferred from the older Swiss legislation, namely, no punishment without law, and no punishment without guilt. An important feature of the new Code is the readjustment of the offender. Any clumsy system can punish, but a system which aims at reformation and rehabilitation cannot proceed without individualisation and measures of prevention and treatment. According to Swiss experts the outstanding part of the new Code is the treatment of children and juveniles. The motive of that section is to provide for the proper care, training and adjustment of delinquent children and adolescents. Children under the age of six are considered to be non compos and are not under any criminal jurisdiction, between six and fourteen measures of training and treatment are provided. Prison or penitentiary confinement cannot be imposed upon juveniles between the ages of 14 and 18, and minors aged 18-20 are less severely punished by penal measures than adults. The Code makes special provisions for vagrants, alcoholics and drug addicts and appears to be unique in making provision in aid of the victim of an offence who on his petition and on his assignment of a corresponding share of his claim to the State may be recompensed for his damage from the fine, the proceeds of goods seized and sold or confiscated from the peace bond—a measure of recompense for his damage as a result of the offence and where the offender has not or cannot reimburse his victim. The experience of the translators in social service and prison reform in Germany and America enhances the value of their introduction to the Code. Space permits only a few of its features being briefly referred to here.

W. NORWOOD EAST.

Journal of Genetics

July 1939, Vol. 38, Nos. 1 and 2.—*The daughters and sisters of haemophilics.*—By J. B. S. Haldane and U. Philip.—This study is the first investigation designed to determine whether

homozygous and heterozygous dominants occur in the expected proportions in certain human families. The data provided in Birch's (1937) monograph on haemophilia are subjected to statistical study. The conclusion is that the ratio expected on genetical grounds is fulfilled: that

is to say, within the limits of accuracy imposed by errors of diagnosis and sampling, the daughters of haemophilic men bear equal numbers of normal and haemophilic sons, whilst half the sisters of haemophilic men are heterozygous for haemophilia.
C. D.

CORRESPONDENCE

To the Editor, Eugenics Review.

SIR,—In your July issue Viscount Dawson is quoted as saying:

"The remedy is not a return to the high birth-rate of Victorian times, with its accompanying high infant death-rate, but the ideal of a family of four, wisely spaced, and wherever possible no family of less than three."

What Lord Dawson demands is exactly the high birth-rate of Victorian times. In the last decade of Victoria's reign there were in England and Wales 2,394,105 marriages and 9,155,153

births. That gives an average of 3·8 births per marriage.

During the said period the average birth-rate was 29·9 per thousand. Such a birth-rate if combined with our present death-rate of 11·6 would cause the population to multiply itself six times in a century. To provide for such rapid multiplication in our small island would be utterly impossible, and Lord Dawson's ideal family of four, however wisely spaced, would involve a huge increase in the death-rate.

R. B. KERR.

335 Sydenham Road,
Croydon.
